

# Climate Change

What to think and what to do

## 6. What Humankind needs to do, and What to do (personal)

*We don't inherit the Earth from our ancestors, we borrow it from our children.*

What Humankind needs to do, and What to do (personal)

## Introduction

A quick note on Mitigation vs Adaptation

- Mitigation is stopping it happening (putting a lock on the stable door, and using it)
- Adaptation is addressing the damage (using a bike instead now)
- M more conservative, less violent, and CHEAPER (but already, we need lots of A too – flood walls etc)
- The more we do M, the better state we're in, and the less A we need.
- When it becomes *obvious* that A has become *essential*, the will to spend huge sums will follow.
- But the sums will be *huger*, and the damage to lifestyles huger, so let's focus on M.

What Humanity needs to do (macro-scale – global, national)

- The scale of the problem (and the relative irrelevance of new technology)
- The uselessness of Governments
- What we need from Governments
- How do we give Governments a slap?
- It's doable!

What you can do personally

- Personal/private actions (this week)
- Why Group action matters more (next time)

What Humankind needs to do, and What to do (personal)

## What Humankind needs to do - The scale of the Problem

Global emissions from fossil fuel reserves would exceed carbon budget by more than **seven times**

0 tons of CO<sub>2</sub>e emissions embedded in fossil fuel reserves



**"WHEN WE'RE IN A SITUATION WHERE YOU'VE GOT TWO, THREE, FOUR TIMES MORE FOSSIL FUELS **IN DEVELOPMENT** FOR THE REMAINING CARBON BUDGET, THEN THAT TELLS YOU THAT POLICY IS MORE THAN SLIGHTLY OUT OF SYNC. IT'S **FUNDAMENTALLY OUT OF SYNC.**"**

**MARK CAMPANALE – C.E.O.  
CARBON TRACKER INITIATIVE**

We have 7 times more than we can use, yet we keep bringing more on-stream. AND, we have ***have not EVEN stopped LOOKING FOR MORE!***

Guardian graphic. Source: The Global Registry of Fossil Fuels. Note: Carbon budget to reach +1.5C warming from pre-industrial levels based on IPCC 50% probability scenario.



Global  
Energy  
Monitor



Carbon Tracker  
Initiative

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## What Humankind needs to do - The uselessness of Governments – What are they up to?

*“If govts are serious about the climate crisis, there can be NO NEW investments in Oil, Gas and Coal, from NOW”* Dr Fatih Birol, Exec Director International Energy Agency [iea.org](https://www.iea.org). And yet:

- Within the next few years, Qatar Energy, Gazprom, Saudi Aramco, ExxonMobil, Petrobras, Turkmengaz, Total, Chevron and Shell are planning to open NEW sites
- As part of its new energy strategy, the UK government has started licensing new projects in the North Sea.
- Several major UK fossil fuel projects have been approved *since Cop26 concluded*, & about 50 schemes are thought to be in the pipeline between now and 2025.
- We can't rely on COPs – Egypt was a damp squib, the next one is in UAE!
- *“World's governments plan to produce more than twice the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C”*:  
<https://productiongap.org>

What Humankind needs to do, and What to do (personal)

# What Humankind needs to do - The scale of the Problem – Cambridge Experts roadmap



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Seven Cambridge  
scientists

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## 'net zero' is a new phraseology

▪ IPCC AR5 WGIII (2014) – summary for policy makers <i>(related to passive house, etc.)</i>	24x
▪ IPCC AR6 WGIII (2022) – summary for policy makers <i>(virtually all related to CDR/NETs)</i>	963x
▪ The UK's CCC's 5 <sup>th</sup> budget main report (2015)	zero
▪ The UK's CCC's 6 <sup>th</sup> budget main report (2020)	3000-5000x

“Because we **can't wait for breakthrough technologies** to deliver net-zero emissions by 2050. Instead, we can plan to respond to climate change using **today's technologies** with incremental change.

“This will reveal many opportunities for growth but **requires a public discussion** about future lifestyles.”

Why 'Absolute', not 'Net'?

Carbon offsetting is not warding off environmental collapse – it's accelerating it | George Monbiot Guardian

And more specifically...

Carbon capture and storage (CCS) is NOT a solution to net zero emissions plans, report says | The Guardian

Kevin Anderson showed references to 'NetZero' in IPCC and UK docs. Scarcely used in 2015, now it's everywhere – a comforting *mantra*.

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What Humankind needs to do - The scale of the Problem – Zero

So – *UNLESS* Carbon Capture becomes real and cheap and huge (which it WON'T):

# Not “NET” ZERO – We Need “ZERO”!

Which means, this decade (7 years) ...

Close almost all airports

Reduce Meat and Sea Freight by 50%

Phase out FFs except for Plastic

(and lots more)



	2020-2029	2030-2049	2050 Absolute Zero	Beyond 2050
Road vehicles	Development of petrol/diesel engines ends; Any new vehicle introduced from now on must be compatible with Absolute Zero	All new vehicles electric, average size of cars reduces to ~1000kg.	Road use at 60% of 2020 levels - through reducing distance travelled or reducing vehicle weight	New options for energy storage linked to expanding non-emitting electricity may allow demand growth
Rail	Growth in domestic and international rail as substitute for flights and low-occupancy car travel	Further growth with expanded network and all electric trains; rail becomes dominant mode for freight as shipping declines	Electric trains the preferred mode of travel for people and freight over all significant distances,	Train speeds increase with increasing availability of zero emissions electricity
Flying	All airports except Heathrow, Glasgow and Belfast close with transfers by rail	All remaining airports close		Electric planes may fly with synthetic fuel once there are excess non-emitting electricity supplies
Shipping	There are currently no freight ships operating without emissions, so shipping must contract	All shipping declines to zero.		Some naval ships operate with onboard nuclear power and new storage options may allow electric power
Heating	Electric heat pumps replace gas boilers, and building retrofits (air tightness, insulation and external shading) expand rapidly	Programme to provide all interior heat with heat pumps and energy retrofits for all buildings	Heating powered on for 60% of today's use.	Option to increase use of heating and cooling as supply of non-emitting electricity expands
Appliances	Gas cookers phased out rapidly in favour of electric hobs and ovens. Fridges, freezers and washing machines become smaller.	Electrification of all appliances and reduction in size to cut power requirement.	All appliances meet stringent efficiency standards, to use 60% of today's energy.	Use, number and size of appliances may increase with increasing zero-emissions electricity supply
Food	National consumption of beef and lamb drops by 50%, along with reduction in frozen ready meals and air-freighted food imports	Beef and lamb phased out, along with all imports not transported by train; fertiliser use greatly reduced	Total energy required to cook or transport food reduced to 60%.	Energy available for fertilising, transporting and cooking increases with zero-emissions electricity
Mining material sourcing	Reduced demand for iron ore and limestone as blast furnace iron and cement reduces. Increased demand for materials for electrification	Iron ore and Limestone phased out while metal scrap supply chain expands greatly and develops with very high precision sorting	Demand for scrap steel and ores for electrification much higher, no iron ore or limestone.	Demand for iron ore and limestone may develop again if CCS applied to cement and iron production
Materials production	Steel recycling grows while cement and blast furnace iron reduce; some plastics with process emissions reduce.	Cement and new steel phased out along with emitting plastics. Steel recycling grows. Aluminium, paper reduced with energy supply.	All materials production electric with total 60% power availability compared to 2020	Material production may expand with electricity and CCS, CCU, hydrogen may enable new cement and steel.
Construction	Reduced cement supply compensated by improved material efficiency, new steel replaced by recycled steel	All conventional mortar and concrete phased out, all steel recycled. Focus on retrofit and adaption of existing buildings.	Any cement must be produced in closed-loop, new builds highly optimised for material saving.	Growth in cement replacements to allow more architectural freedom; new steel may become available.
Manufacturing	Material efficiency becomes prominent as material supply contracts	Most goods made with 50% as much material, many now used for twice as long	Manufacturing inputs reduced by 50% compensated by new designs and manufacturing practices. No necessary reduction output.	Restoration of reduced material supplies allows expansion in output, although some goods will in future be smaller and used for longer than previously.
Electricity	Wind and solar supplies grow as rapidly as possible, with associated storage and distribution. Rapid expansion in electrification of end-uses.	Four-fold increase in renewable generation from 2020, all non-electrical motors and heaters phased out.	All energy supply is now non-emitting electricity.	Demand for non-emitting electricity drives ongoing expansion in supply.
Fossil fuels	Rapid reduction in supply and use of all fossil fuels, except for oil for plastic production	Fossil fuels completed phased out		Development of Carbon Capture and Storage (CCS) may allow resumption of use of gas and coal for electricity

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## What Humankind needs to do - The scale of the Problem - IPCC

But we're stuck for now with 'Net' Zero – which is better than 'Non-Zero'...

But it still needs Governments to DO WHAT THEY SAY THEY WILL....

We have the blueprint: the UK's "[sixth carbon budget](#)" presented 2020 to the Govt by its own Committee on Climate Change (the independent advisory committee set up under the 2008 Climate Change Act).

### [The Great Climate Fight](#)

(Channel 4, Nov 2023 - Kevin McCloud, Hugh Fearnley-Whittingstall and Mary Portas... summarise this course!)

*"They are completely and utterly gaslighting us. We have a lying government."* (Mary Portas)

If you watch one program, watch this one.

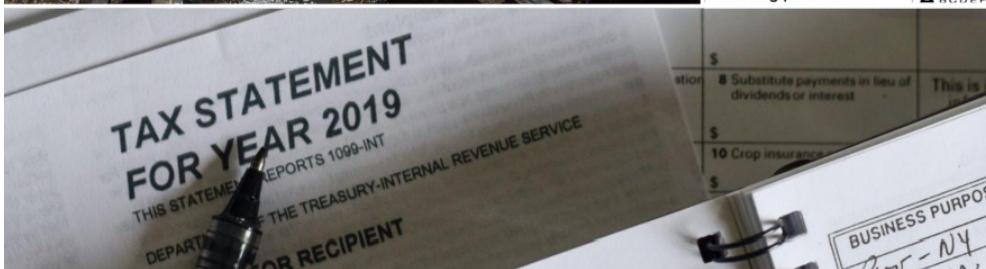
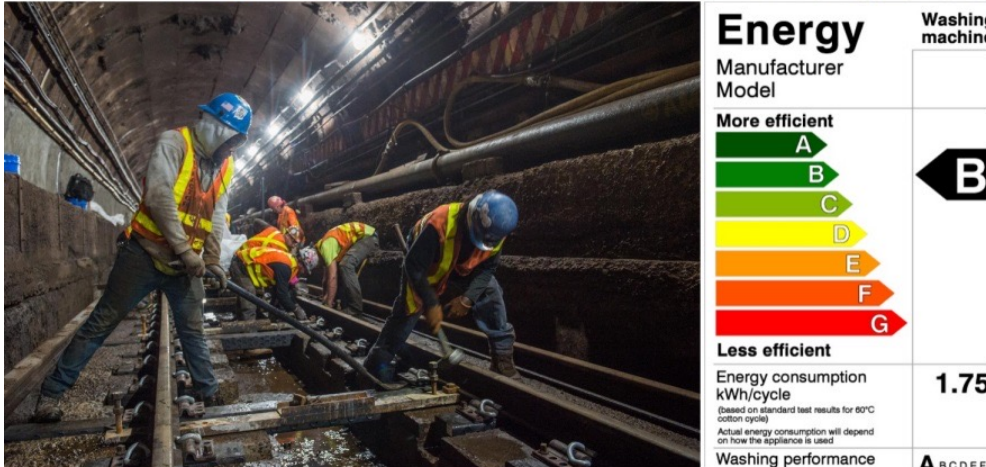
TL;DR:

- On-shore wind is cheapest solution, but Govt is too dependent on Big Oil to push back on NIMBYism
- Housing still being built is hopelessly behind the standards needed, but Govt too dependent on Big Builders (20% of all donations to Conservatives)
- Public is being told it's all too expensive, when IT IS actually cheaper
- All despite broad approval in the UK for much more radical policies: [Poll finds British public largely supports strong climate policies \(phys.org\)](#)



What Humankind needs to do, and What to do (personal)

# What Humankind needs to do - The scale of the Problem - IPCC mitigation – Role of Govt



## Policies, regulatory and economic instruments

- regulatory and economic instruments have **already proven effective** in reducing emissions
- **policy packages** and **economy-wide packages** are able to achieve **systemic change**
- ambitious and effective mitigation requires **coordination across government and society**

[World Bank/Simone D. McCourtie, Dominic Chavez CC BY-NC-ND 2.0, Trent Reeves/MTA Construction & Development CC BY 2.0, IMF Photo/Tamara Merino CC BY-NC-ND 2.0, Olqa Delawrence/Unsplash.]



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## What Humankind needs to do - The scale of the Problem - IPCC on mitigation: **Financing**

switch

### Sixth Assessment Report

WORKING GROUP III – MITIGATION OF CLIMATE CHANGE

## Closing investment gaps

- financial flows: **3-6x lower** than levels needed **by 2030** to limit warming to below 1.5°C or 2°C
- there is **sufficient global capital** and liquidity to close investment gaps
- challenge of closing gaps is widest for developing countries



[Tobias/Unsplash, Rwanda Green Fund /CC BY-SA 2.0]





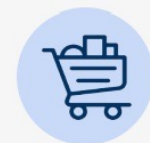
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# What Humankind needs to do - The scale of the Problem - IPCC mitigation – Social Changes



## Demand and services

- potential to **bring down** global **emissions** by **40-70%** by 2050
- walking and cycling, electrified transport, reducing air travel, and adapting houses make large contributions
- **lifestyle changes** require **systemic changes** across all of society
- **some** people require additional **housing, energy** and **resources** for human wellbeing



[Bosch, Unsplash/Yoav Aziz, Adam Bartoszewicz, Victor Hernandez]

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## What Humankind needs to do - The uselessness of Governments – Why are they useless?

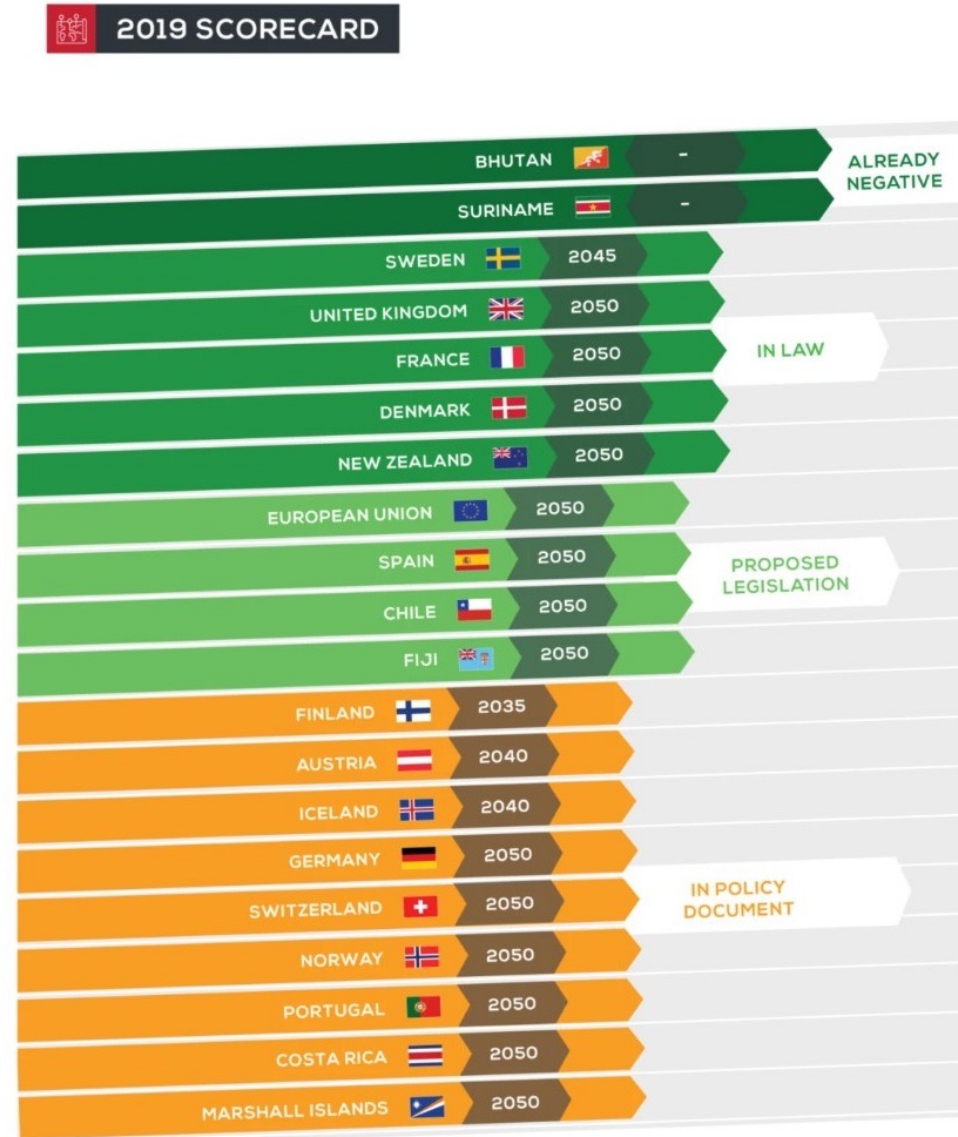
- Just 10 financial institutions own 50% of unburned fossil fuels:  
<https://www.newscientist.com/article/2332390-10-finance-firms-effectively-own-half-of-all-future-carbon-emissions/>
- The [Carbon Underground 200](#) is a list of the 200 largest fossil fuel companies.
  - Combined, the companies own 98 per cent of known fossil fuel reserves, an amount that would emit 674 gigatonnes of carbon if burned – nearly triple the [global carbon emissions](#) limits needed to constrain global warming within the 1.5°C ...
  - Don't be holding fossil fuel assets when these reserves become 'stranded assets'.
- Governments are captured. They know what needs to happen. They just won't / can't do it. For example in the UK.....
- [Fossil fuels received £20bn more UK support than renewables since 2015](#) Guardian 2023 (Renewables: £60bn, FF: £80bn)



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## What Humankind needs to do - What do we *need* from Governments? The basics

- 1. **Tell the Truth!** And 2. **Lead!**
  - “There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.....**the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order**”  
Machiavelli
  - His solution was power. Today it's persuasion/consent via media/voting...
  - “Between equal rights, force decides”  
Marx
  - In theory it's one person one vote – in practice its one dollar one vote
- 3. Make *Binding* pledges to **break cahoots** with Big Oil (and Gas and Coal)
  - Enact a legal obligation to reach net-zero →  
NB: current scorecard is here: [Net Zero Scorecard \(eciu.net\)](https://www.eciu.net/net-zero-scorecard)
- But beware...
  - While commitments must be real, and tracked, there is evidence that a binding commitment gives Govts a smoke-screen – “Of course we are serious, even though we're approving this new oil field...”
  - <https://www.independent.co.uk/business/new-oil-and-gas-exploration-good-for-environment-insists-climate-minister-b2197665.html>
  - Exploration continues: [2022 best year in a decade for new global oil and gas discoveries \(energyvoice.com\)](https://energyvoice.com/2022-best-year-in-a-decade-for-new-global-oil-and-gas-discoveries/)
  - And as noted, NetZero is not enough, while offsets are such a scam.



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## What Humankind needs to do - What do we need from Governments? – The Scientists

[Professor Kevin Anderson](#)

(Manchester and Uppsala, former Director of the Tyndall Centre for Climate Change Research at Manchester, recognised world expert in climate science)

- Produced this summary around COP26 →
- “avoiding even a 4 °C rise demands a radical reframing of both the climate change agenda and the economic characterisation of contemporary society”
- Point 10 picked up in detail in “What we need to do NOW – for a zero carbon future” by Chris Goodall →

### Policy outline to put the UK on track for 1.5°C

- 1) Immediate moratorium on all new fossil fuel developments
- 2) Phase out all fossil fuel production by 2035 (*with a ‘just’ transition for the workers*)
- 3) Immediate moratorium on airport expansion
- 4) Stringent frequent flyer levy (*to stop frequent flyers, yet still permit occasional trips*)
- 5) Move away from cars (inc. EVs) in cities & dense urban areas
- 6) Facilitate a major shift to active, public & virtual transport
- 7) All new buildings to be Passive House standard with onsite renewables
- 8) Major retrofit agenda for all those buildings expected to remain in use
- 9) No new fossil fuel power stations
- 10) Massive programme of electrification of energy supply/use (*3-4x current level in ~20yrs*)

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## What Humankind needs to do - What do we need from Governments? **The specifics**

Be radical with *policies* not just *targets*.

[Five things every government needs to do right now to tackle the climate emergency](https://theconversation.com/five-things-every-government-needs-to-do-right-now-to-tackle-the-climate-emergency)  
[theconversation.com](https://theconversation.com)

Rebecca Willis, Universities of Exeter and Lancaster

### 1. Involve ALL departments

- Don't sweep the issue away into a single ministry that then has to fight all others
- Each State Premier (PM etc) should co-ordinate climate *action* across all areas of government
- Don't let one department hide, in reliance on others pulling the train (as currently in the UK)

### 2. Bring the public to the fore

- Involve and engage voters - use participatory forms of politics, such as Citizens' Assemblies
- Don't impose climate policies through stealth - profoundly undemocratic, and *likely to backfire*.
- People ARE willing to make changes in their own lives IF they see this as part of a wider national effort.
- Include groups who stand to lose (coal miners etc)
  - with comprehensive support
  - not just vague promises of green jobs

What Humankind needs to do, and What to do (personal)

## What Humankind needs to do - What do we need from Governments?

### 3. Implement “Symbolic” policies

- I.e. policies with tangible impacts that also *raise the political profile* of climate action
- Thus, send citizens and businesses a clear signal on future investment and priorities
  - so catalysing radical, rather than incremental, change - e.g.:
  - Allow/encourage individuals/groups to generate and sell renewable energy
  - Ban advertising petrol and diesel cars
- Set personal and business carbon allowances – if fair, these will be popular (I’m doing it, why aren’t you?)

### 4. Keep it in the ground – cut FF exploration, production, subsidies

- Make explicit and tangible commitments to transition away from FFs
- Despite legal NZ targets in the UK and Norway, both plan to keep extracting
  - But 1.5°C *requires* us to leave most known FFs unburned
- Impose a moratorium on FF exploration
- End tax breaks for FF ([USD 372 billion annually](#) - globally), spend it helping transition
- Boost sustainable sources like wind and solar – now 85% cheaper since 2010
- Retire coal for good - NOW

### 5. Be both realistic and transparent about Carbon Capture & Storage (“CCS”)

- Keeping temperatures down isn’t possible without some form of removal, be it via trees or air filtering machines. BUT..
- Spell out, and separate out, the contribution of negative emissions technologies (eg CCS) to net zero targets
- Don’t rely on it - CCS *may not be* feasible, economically
  - and distracts resources - and attention - away from reducing emissions



What Humankind needs to do, and What to do (personal)

## What Humankind needs to do - What do we need from Governments?

And 3 more here: [Climate change: IPCC scientists report five ways to save the planet - BBC News](#) (They also mention 4 and 5 above)

### 6. Curb demand

- Reduce demand for energy in the areas of shelter, mobility and nutrition – via **tax, subsidies,** public education, ..
  - low carbon diets
  - food waste
  - how we build/adapt our cities
  - how we shift people to more carbon friendly transport options
  - electric cars can make a big difference - but need investment in charging technology to speed the uptake

### 7. Recognise the TRUE economic costs and benefits (of FFs and resources vs sustainables and circular economy)

- If we incorporate the economic damages caused by climate change, the global cost of limiting warming to 2°C over this century is *lower* than the global economic benefits of reducing warming
  - Keeping temperatures well under 2°C costs a bit more, but not much, if the avoided damages, and wide range of co-benefits such as cleaner air and water are correctly priced
  - *"If you take the most aggressive scenarios in the entire report, it would cost at most 0.1% of the rate of annual GDP growth assumed":*  
Prof Michael Grubb, co-ordinating lead author of the IPCC report

### 8. Pressure the Rich

- They have an outsized impact - 10% of households contribute 45% of consumption-based household GHG emissions
  - So they can make the biggest impact by reducing
  - Especially on transport - including on private jets. Tax this more (why is kerosene STILL untaxed??)
  - They also have most influence – as role models, investors and lobbyists
  - This is true at global level (we're all in *that* 10%), but also within countries (where not all of us are)
    - [top 1% of UK earners produce TWENTY TIMES more emissions than the bottom 10%](#) Guardian Nov 2022
    - [richest 1% \(global\) account for more carbon emissions than poorest 66%](#) Guardian Nov 2023

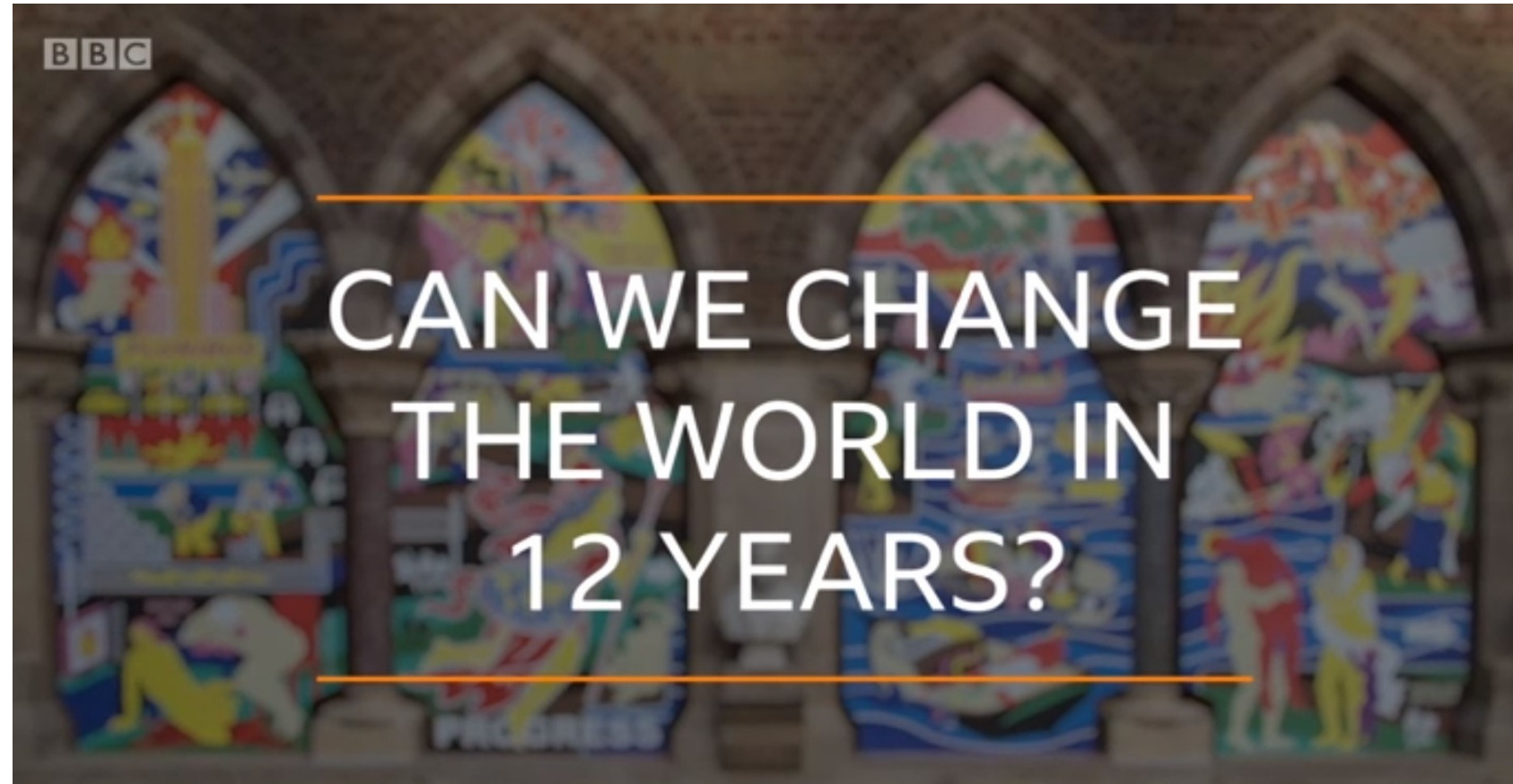
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## What Humankind needs to do - **It's doable!** - Rapid Transitioning

*"It's always impossible, until it's done"*

Nelson Mandela

Can we do it? Why not! (Click → to view )



Rapid Transition Alliance - Evidence-based Hope in a Warming World:

- Resources: <https://www.rapidtransition.org/resources/> and in particular:
- [A pocket book of hope | Rapid Transition Alliance](#)

What Humankind needs to do, and What to do (personal)

## What Humankind needs to do - **It's doable!** – Breakthroughs/Tipping Points

Three “super-leverage points” could trigger a cascade of tipping points for zero-carbon solutions in sectors covering 70% of global greenhouse gas emissions, according to a new report: [The-Breakthrough-Effect.pdf \(systemiq.earth\)](#)

- Electric cars
  - Policies:
    - zero emission vehicle mandates
    - accelerated build out of charging infrastructure
  - Knock-on effect: volume production → cheaper batteries and charging (below FF car costs)
- Green ammonia (GnA) use in fertiliser production (vs grey ammonia from FFs, currently 2/3 the cost)
  - Policy: introducing a 25% blending mandate globally
  - Knock-on effect:
    - cheaper hydrogen, due to volume production to make GnA (hence also making GnA cheapest option, so mandate can be retired)
    - GnA becomes viable to power shipping
    - green hydrogen becomes viable in steel production (to replace coking coal)
- Plant-based meat
  - Policies (to double market share to 20% by 2035):
    - public procurement
    - public investment in research and development
  - Knock-on effects:
    - free-ups c10% of all agricultural land in use today
    - tips the economic value of deforesting land, to below that of protecting it.

What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions

Enough of what we need at the global/national level.

(We'll return to that next week, when looking at *co-ordinated action* by citizens.)

Let's turn to the Personal/Private



What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions

[What can I do to stop climate change? | New Internationalist](#)

*“Lifestyle changes are no substitute for collective action. But personal carbon-cutting still matters – it’s a powerful way to signal the climate emergency to those around us, move the needle on policy and set bigger cultural changes in motion.”*

Mike Berners-Lee

So while collective action is the critical thing, personal actions help, because:

- They contribute (a bit)
- They influence others
- They help you start conversations
- They make it *easier* for others to follow
- They remind you what’s at stake

M B-L’s nine-step carbon detox:

1. Adjust your diet
2. De-carbonize your travel
3. Consume less, and wisely
4. Cut home energy use
5. Clean up investments
6. Talk about it
7. Use your power
8. Do all of the above
9. Be kind to yourself

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## What to do (personal) - Personal/private actions – Step 1

### Carbon footprint of meats and meat substitutes per 100 grams of protein

Emissions based on life-cycle analyses which include agricultural production, animal feed, raw materials, processing, transport, and packaging. This is measured in kilograms of carbon dioxide-equivalents per 100 grams of protein.

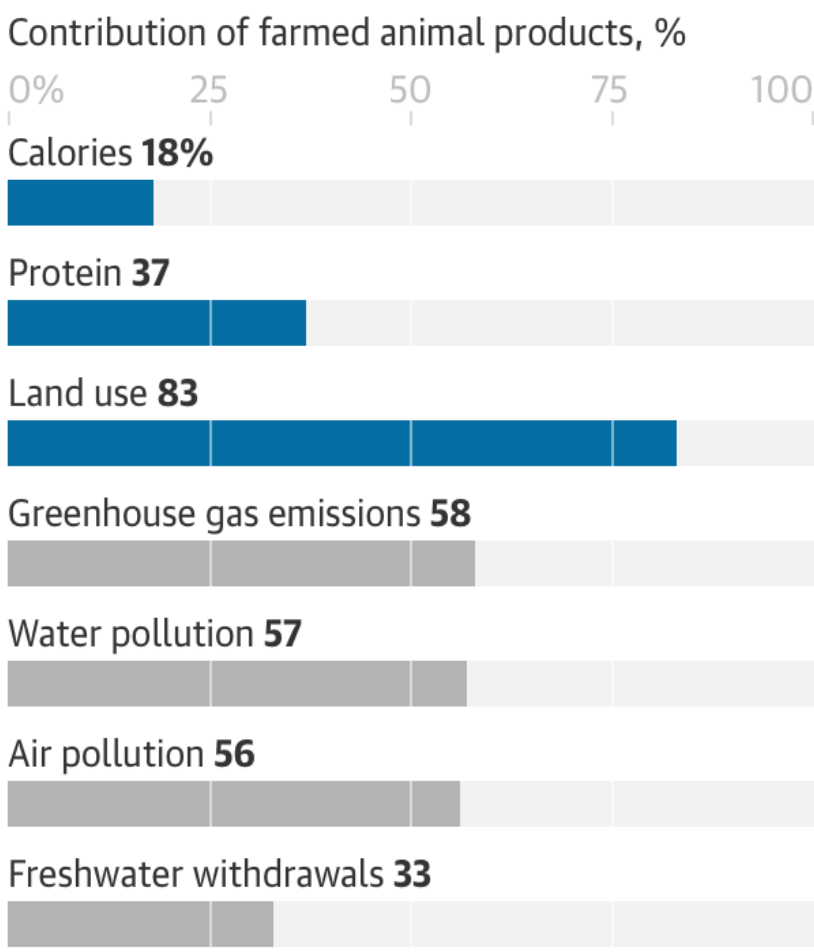


### 1. Adjust your diet

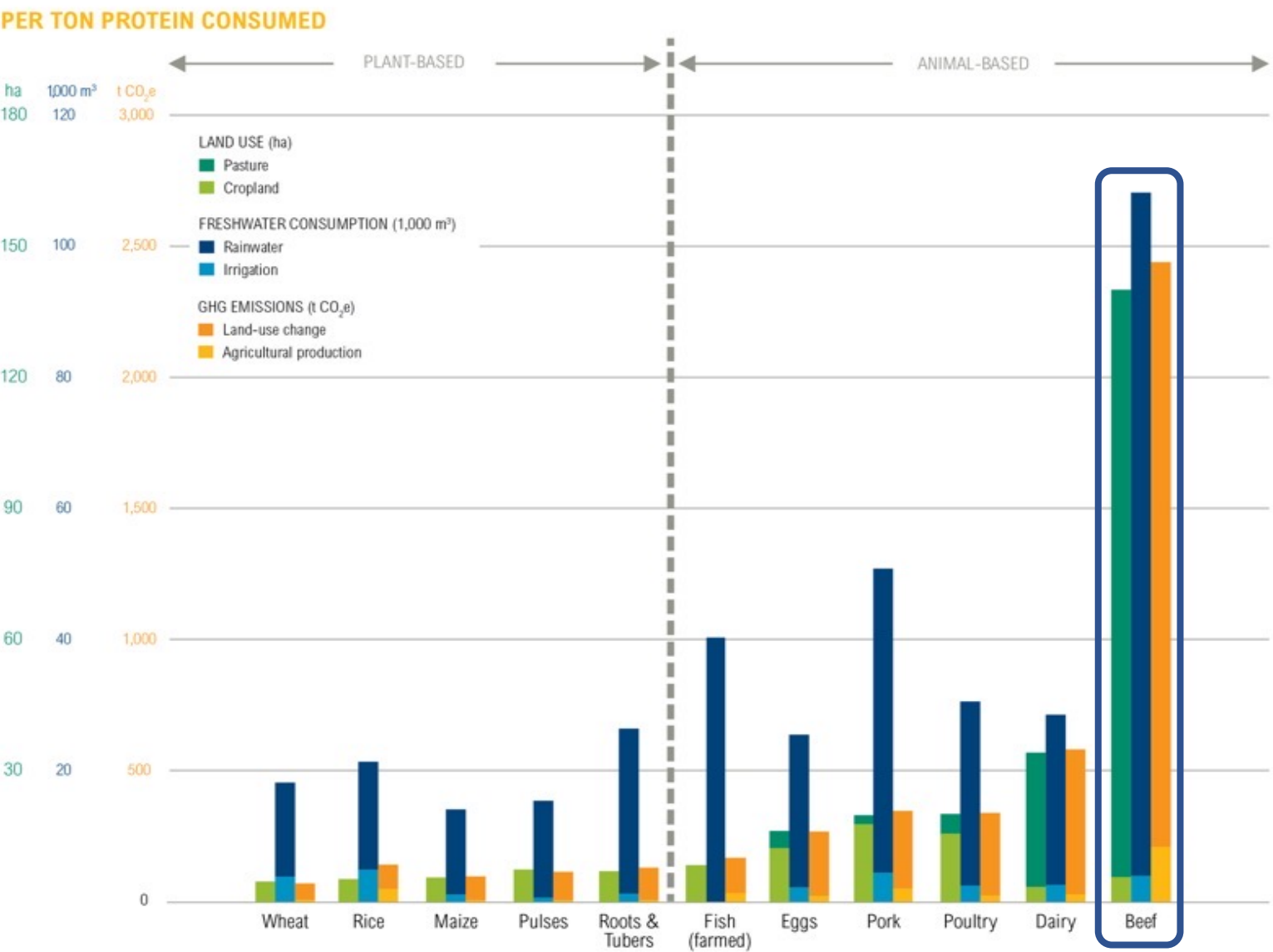
- Cut out meat/dairy, esp beef/lamb – there are tasty low carbon alternatives
- Eat all you buy (food waste is 8% of GHGs)
- Avoid air-freighted/out-of-season food (berries, mange-tout, asparagus, ..)
- Avoid frozen ready-meals

Chart: Hannah Ritchie • Created with Datawrapper

**More than 80% of farmland is used for livestock but it produces just 18% of food calories and 37% of protein**



**Animal-Based Foods Are More Resource-Intensive than Plant-Based Foods**



Without Beef, huge tracts of land get rewilded, absorbing CO2

What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions – Steps 2-3

### 2. De-carbonize your travel

- Fly less or, better still, stop - a return trip UK-Australia = 3-4 years of running a car
  - BTW, only about 2-4% of the global population flies even once, in any year.
- Cut car use (walk, cycle, use public transport, share, work from home)
- Drive a small car slowly – driving at 80mph is 50% worse than 60mph
- Go electric or plug-in hybrid – but nb 1/3 of car damage is from building it... so old, efficient car can be better

### 3. Consume less, and wisely

- Buy less junk
- Buy local
- Check supply chains for carbon responsibility, fair livelihoods and other sustainability
- Buy what lasts, and is repairable
- Repair before replacing - [Cambridgeshire Repair Cafes - Cambridge Carbon Footprint](#) (3 before Xmas!)
- Sell on or give away unwanted stuff - [Gumtree | Free classified ads from the #1 classifieds site in the UK](#)
- Choose energy-efficient white goods - if you use the oven, cook two things
- Locate your freezer (and fridge?) in a cool place if poss
- Carry a reusable cup/water bottle



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## What to do (personal) - Personal/private actions – Steps 4-5

### 4. Cut home energy use

- Buy electricity from a *real* green energy provider
- Lower the thermostat, turn off peripheral radiators
  - Wear a jumper/woolly hat indoors (it's not hard :)
- Insulate (drafts first, then loft, windows, walls)
- Install smart heating (efficient boilers, remote controls that include radiators), solar panels, heat pumps
- Avoid tumble drying
- Wash fabric at 30degC
- Avoid very hot or long showers
- Turn lights off

### 5. Clean up investments **[THIS MAY BE BY FAR THE BIGGEST, IF YOU HAVE A LARGE PENSION POT]**

- Use pension and saving schemes that don't *touch* fossil fuel companies
- Invest in renewables and reforestation
- Make sure your advisors/providers get at least one letter saying you want to avoid FFs and they need to do a better job of offering such options, in an accessible/intuitive/clear way
- [Make My Money Matter - your pension is powerful](#) – initiative to help you check/switch pension, claiming that doing this is doing 21x more than stopping flying, going veggie and switching energy supplier, combined!
  - In the news here: [Celebrities call on UK banks to stop financing new oil, gas and coalfields | Climate crisis](#)

What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions – Investments

Plenty more out there but here are a few ideas. Research carefully before any commitment – these are not *recommendations*..

- [Shared Interest Ethical Investment Co-operative \(shared-interest.com\)](https://shared-interest.com) – “*provides financial services and business support to make livelihoods and living standards better for people as they trade their way out of poverty*” (not specifically anti-FF, but focused on sustainability and a generally good egg)
- [The Big Exchange | The home of ethical & impact investing](https://thebigexchange.co.uk) - makes it easier to choose funds that are investing in companies creating positive solutions to combat the world's biggest challenges. Offer ISAs
- [Banking for good \(triodos.co.uk\)](https://triodos.co.uk) - empowering customers to put people and the planet first with their everyday banking and investments (current accounts and investment funds)

Moving your money may be the single biggest thing you can do. And once you've done it, it's an easy one to talk about, to others.

What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions – Steps 6-9

### 6. Talk about it (See resources on having good conversations)

- Take your low-carbon mindset to work, to the pub and into your own household
- Be friendly but don't let that get in the way of clarity
- Help create a culture that frowns on ignoring climate change – as with smoking, drunk driving
- Talk to tradesmen, shopkeepers, taxi drivers, ..

### 7. Use your power

- Make sure politicians hear - well in advance of elections - that we insist on coherent and strong climate policies (*More next week*)
- What other powers do you have? E.g. pension-switching (5 above)

***“The most common way people give up their power is by thinking they don't have any.”***

Alice Walker (author of *The Color Purple*)

### 8. Do all of the above

- It's an emergency
- Put a plan in place and work your way through it
- Keep going!

### 9. Be kind to yourself

- Don't beat yourself up
- Just keep moving in the right direction and *enjoy* it – there is NO BETTER USE OF YOUR TIME

What Humankind needs to do, and What to do (personal)

## What to do (personal) - Personal/private actions – Why Group action matters more

I'm doing *my* bit, why do I need to engage in Group actions?

- Because even in aggregate, personal actions won't be enough, *or fast enough*
- Because we need to change
  1. Public Attitudes and hence
  2. Politicians, and hence
  3. Businesses, and hence
  4. Polluting behaviour (resource extraction and waste production)
  5. The availability of decent alternatives to high-carbon activities
- As explained, our institutions won't act unless **we** (via Public Attitudes):
  - Push them into acting, OR
  - Burn them down and build different ones

And to do that, *at the pace we need to see*, we need to act in *groups*.
- Also, bluntly, because it is our **duty**
- Age is no barrier. In fact it helps – we have more
  - Money
  - Time
  - Influence/networks
  - And perhaps also Wisdom (to fix the mistakes *we* made on the way!)

What Humankind needs to do, and What to do (personal)

What to do (personal) - Personal/private actions – Why Group action matters more

Isn't group action for the fruit cakes and crusties??

Not any more it isn't!

*“Climate activists are sometimes depicted as dangerous radicals. But, the truly dangerous radicals are the countries that are increasing the production of fossil fuels”*

UN Sec. Gen. [@antoniouterres](#)

So next week, we'll look at how mild-mannered, thoughtful, bashful people can be effective activists! Activism is *much more than* a yellow vest and tube of superglue. There is a lot to be done *without leaving home!*